

20070521.ba v04_n053.bam.20070521

>From ???@??? Mon May 21 14:59:25 2007 -0500
Date: Mon, 21 May 2007 19:58:24 GMT
From: Old Tube Radios <boatanchors@theporch.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: BOATANCHORS digest 4053
Message-Id: <20070521195825.4CDB6470184@srvr1.theporch.com>

BOATANCHORS Digest 4053

Topics covered in this issue include:

- 1) Re: Heath SWR Bridges
by "Arden Allen" <gumbear@pacbell.net>
- 2) FS: Various After-Dayton Items
by John Poulton <jp@cs.unc.edu>
- 3) What? Me sell on Boatanchors? Oh, dear
by listown@nanniandjack.com (Mail List Owner)
- 4) Re: Dayton Hamfest coord.s
by Charles <charlesmorris@hughes.net>
- 5) Rarely seen TMC receiver -- DDDR-10 variant
by "Grant Youngman" <nq5t@tx.rr.com>
- 6) Re: Heath SWR Bridges
by wb3fau@att.net
- 7) End of Era - Rugby Station Closes Its Doors
by Jerry Proc <jerry7proc@yahoo.com>
- 8) RE: Rarely seen TMC receiver -- DDDR-10 variant
by "Grant Youngman" <nq5t@tx.rr.com>
- 9) SWR Bridges
by John Sehring <jsehring@siouxvalley.net>
- 10) Question - Heathkit DX-100 Power Supply
by Mike <mike46@shaw.ca>
- 11) Re: Question - Heathkit DX-100 Power Supply
by Bob Roehrig <broehrig@aurora.edu>
- 12) Re: Question - Heathkit DX-100 Power Supply
by spr@earthlink.net
- 13) SWR Bridges - More
by John Sehring <jsehring@siouxvalley.net>
- 14) Re: Question - Heathkit DX-100 Power Supply
by Rodger <wq9e@dtinspeed.net>
- 15) Re: SWR Bridges - More
by Bob Roehrig <broehrig@aurora.edu>
- 16) Re: SWR Bridges - More
by spr@earthlink.net
- 17) Re: Question - Heathkit DX-100 Power Supply
by "Arden Allen" <gumbear@pacbell.net>
- 18) Re: SWR Bridges - More

by Garey Barrell <k4oah@mindspring.com>

Message-ID: <002401c79a8b\$e8d19750\$4c9e480c@KB6NAX>

From: "Arden Allen" <gumbear@pacbell.net>

To: Old Tube Radios <boatanchors@theporch.com>

Subject: Re: Heath SWR Bridges

Date: Sat, 19 May 2007 18:34:17 -0700

MIME-Version: 1.0

Content-Type: text/plain;
charset="Windows-1252"

Content-Transfer-Encoding: 7bit

> Keep at them Arden, lot of hard heads out there- sorry no offense
meant- please understand guys- do not make a mountain out of a hole
hill. If you don't want to listen to Arden-[who is right]- maybe you will
listen to a manufacturer?

Oh, come on, Russ. It's not all that serious. I throw in my two bits and
sometimes it get thrown back at me. All part of the fun of thinking out
loud on the List. 73.

Arden Allen
KB6NAX

Date: Sun, 20 May 2007 13:43:59 -0400 (EDT)

From: John Poulton <jp@cs.unc.edu>

To: Old Tube Radios <boatanchors@theporch.com>

Subject: FS: Various After-Dayton Items

Message-ID: <Pine.LNX.4.64.0705201338180.1605@swan.cs.unc.edu>

MIME-Version: 1.0

Content-Type: TEXT/PLAIN; charset=US-ASCII

I have a number of items for sale after the Dayton
madness. They include:

- * A very nice, heavily refurbished Halli HT-32A transmitter
- * A scarce Mackay 3007A marine radio
- * A nice, though slightly ugly, Viking II transmitter
- * An NC-173 receiver
- * A General Radio 740B capacitance bridge
- * A few odd teletype-related items

Full descriptions, pricing, and pictures at:

<http://www.jptronics.org/4sale>

73, John K4OZY

--

From: listtown@nanniandjack.com (Mail List Owner)
To: Old Tube Radios <boatanchors@theporch.com>
Subject: What? Me sell on Boatanchors? Oh, dear
Date: Sun, 20 May 2007 19:02:43 -0700 (PDT)
Message-Id: <20070521020244.439D3140C3@osr506.nanniandjack.com>

Hey gang-

Yes, 'tis I, old list troll, and I have three things to sell (assuming anyone is interested)

- 1) Chicago Transformer (Division of Essex Wire Corporation) Reactor model RS-8250. Specs: 8 henries; 250 ma DC; DC Resistance 90 Ohms; Insultaion tests 2500 volts. Original box -- box is a mess... my dad bought this in the dark ages, lord knows why -- he barely knew which end of a screwdriver to use... It's heavy (duh!) but I will pack and ship... Good offer plus shipping (Rules of Ware)
- 2) Collins 75-A4 receiver in what I believe to be reasonably good shape... I have had this rig for about ten years or so, but moving and divorce and no tools and a new career -- you get the picture -- I just haven't been able to even fire this beauty up. I will not ship her, so Pick-up in Orange County, California (OR, I will meet the buyer along an Interstate Highway route roughly from Anaheim, CA to Evergreen, CO to Omaha, NE to Bloomington, IL to Pittsburgh, PA to Hershey, PA to Middletown, NY to Waterbury/Hartford, CT in mid-late June and deliver) Front panel is clean with no scratches, but previous owner put some dymo stickies on. Best Offer over \$500
- 3) National HRO-500 receiver in what I believe to be good to excellent condition. Like the Collins, I have had the receiver for at least ten years with no time, no tolls, and no space to play with it, so I have never fired it up. Front panel is excellent. That beautiful verneer dial is silky smooth. No shipping, so either Pick-up in Orange County, California or the Interstate route in mid-June. Best Offer over \$500.

Forgive the interruption.

--

73

Jack, W4KH/Mobile - - - Mailing List Archiver/Owner - - -
listtown@nanniandjack.com - "Plus ca change, plus c'est la meme chose"
"Il n'y a que les idiots qui ne changent jamais d'idee"

From: Charles <charlesmorris@hughes.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Dayton Hamfest coord.s
Date: Sun, 20 May 2007 21:47:44 -0500
Message-ID: <tn12535aqv8ebo547b619pf52umo7ioqdr@4ax.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: quoted-printable

On Sat, 19 May 2007 23:26:56 GMT, you wrote:

>Date: Mon, 14 May 2007 20:50:37 -0400 (EDT)
>
>I'm @ 2309 in the fleabie. K4OZY @ 2208 & 9.
>
>Who else praytell?
>
> Marty aka aa4rm

Wish I'd seen these messages before going to (and returning from) Dayton. (Digest mode), I'd have stopped by to say hello. I am sure, though, that I walked past those stalls more than once, and past several more BA'ers too. You'd have easily ID'ed me, just look for the overweight white guy with a ham ballcap, a beard, and glasses :)

Just got home a couple hours ago from the 600 mile drive with (among many other things) a cheap, guaranteed not properly working HP 5245L counter. I always liked Nixies. Anyone know where I can get a power cord for it?

thanks
Charles
(WB3JOK/0)

From: "Grant Youngman" <nq5t@tx.rr.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Rarely seen TMC receiver -- DDDR-10 variant
Date: Sun, 20 May 2007 22:59:48 -0500
Message-ID: <002601c79b5c\$7a736d70\$6601a8c0@GYGateway>
MIME-Version: 1.0
Content-Type: text/plain;
charset="us-ascii"
Content-Transfer-Encoding: 7bit

There are a few TMC DDDR-10 2-30 Mhz dual diversity receivers out there but

not many. Picture and specs at
<http://www.geocities.com/vintagetmc/ddr10-1.html>

I have had one in storage since 1993 after moving from Atlanta to Dallas and no longer having a place to put it. It's the downside of no basements in this part of the world and a hamshack on the 2nd floor. It was in working condition prior to that time, with a few things that needed attention, but basically working (for example, the synthesizer output stage transistor needs to be replaced, and the low order digit in the frequency display of one RF deck needs repair). I cannot guarantee its current operating condition, and it is being made available AS-IS only. It is still physically ok, and actually very nice looking. I've lost the screws that mount the rear cabinet door, but have the door. It's complete with 2 complete manual sets, all extender cards, some original spares, and even the original drop-light in the cabinet.

This is solid state (70's vintage), but one would have to admit it's something of a boatanchor :)

The particular version of the receiver I have is a Navy AN/URR-64(V). It has two receivers (2 RF decks, 2 IF/audio decks) and one synthesizer deck which can be used to feed none, one, or both receivers. By contrast, the FRR-85(V) pictured in the link above has 2 synthesizer units.

I will have some pictures of the rack and modules the week before Ham-Com in Dallas (Plano) and the radio will be available FOR PICKUP ONLY near DFW after Ham-Com (very late Saturday 6/9 or after). It consists of a 6' rack and 5 modules. Large and very heavy.

If anyone has a serious interest let me know and I'll send photos when they're available the week of June 4. This receiver does not have a belt clip :)

Grant/NQ5T

From: wb3fau@att.net
To: Old Tube Radios <boatanchors@theporch.com>
Cc: "Brian A Clarke" <brianclarke01@optusnet.com.au>, "Arden Allen" <gumbear@pacbell.net>
Subject: Re: Heath SWR Bridges
Date: Mon, 21 May 2007 14:25:31 +0000
Message-Id:
<052120071425.14623.4651ABDB000177C60000391F21603759649A0E00CC0D99@att.net>

I am not an authority on Drake accessories, but I think they made a [similar] antenna.

The Antenna is nothing more than a carbon resistor- I take it your solid

state radio
does not like a Cantenna?

Date: Mon, 21 May 2007 10:35:44 -0400 (EDT)
From: Jerry Proc <jerry7proc@yahoo.com>
Subject: End of Era - Rugby Station Closes Its Doors
To: Old Tube Radios <boatanchors@theporch.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=iso-8859-1
Content-Transfer-Encoding: 8bit
Message-ID: <909239.94149.qm@web90603.mail.mud.yahoo.com>

Hello Everyone,

The Rugby time signal station in the UK operating on 60 KHz, closed its doors on April 30, 2007. The once-mighty station which has a rich history going back to 1910 has succumbed to modern technology. For over six years now, Rugby's short wave antennas, which once handled vast amounts of overseas traffic, have fallen into disuse. Three of the twelve antennas are still standing. The traffic once handled by the station has now been rerouted to satellite and trans-oceanic cable. In its last years, the station became a time signal station only. Once the site is cleared of the radio infrastructure, it will be used for a proposed housing development.

On April 30, Rugby switched off its signal at midnight and the new transmitter at Anthorn in Cumbria should have taken over immediately. Unfortunately something went wrong and many radio synchronized clocks in the southern part of England malfunctioned. One user reported that it took two days before hearing the new signal. The new transmitter is of much lower power and doesn't have the same coverage as Rugby.

For anyone interested in reading up on the station's history, go to:
<http://www.alan.melia.btinternet.co.uk/rugbyrs.htm>

--
Regards,
Jerry Proc
E-mail: jerry7proc@yahoo.com

Be smarter than spam. See how smart SpamGuard is at giving junk email the boot with the All-new Yahoo! Mail at http://mr.d.mail.yahoo.com/try_beta?.intl=ca

From: "Grant Youngman" <nq5t@tx.rr.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: RE: Rarely seen TMC receiver -- DDDR-10 variant
Date: Mon, 21 May 2007 09:43:06 -0500
Message-ID: <000c01c79bb6\$58e256d0\$6601a8c0@GYGateway>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="us-ascii"
Content-Transfer-Encoding: 7bit

> There are a few TMC DDDR-10 2-30 Mhz dual diversity receivers
> out there but not many. Picture and specs at
> <http://www.geocities.com/vintageTMC/ddr10-1.html>

There have been many more responses to this posting than I expected, and almost all ask how much I'm asking for the radio. I should have expected that. The answer is -- I don't know, because I just don't know. I want to move it on but am not in "cashing in" mode. Conversely, I'm also not interested in giving it away only to find it being flipped on eBay the following week sitting on a red or white drape or it's equivalent :)

I've kept all the queries and will send out the pics to each of you, and try to get them up at my new ISP in early June when I can shoot them. Then figure out where to go from there. If anyone can offer any positive ideas on this, I'm open to suggestion. At this point I'm thinking I may take the tried and true "Rules of Ware" approach. We'll see :)

(Anyone know what happened to Larry Ware? I haven't seen a posting from him for quite a long time).

Regards ... Grant/NQ5T

Content-Disposition: inline
Content-Transfer-Encoding: binary
Mime-Version: 1.0
From: John Sehring <jsehring@siouxvalley.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: SWR Bridges
Content-Type: text/plain
Message-Id: <20070521164207.43AC631EFCC@filter6.e-filtering.net>
Date: Mon, 21 May 2007 10:42:07 -0600 (MDT)

I used an MFJ 202B noise bridge to measure R & X of a Cantenna.

My "reference" load is a 1/4 Watt 47 ohm resistor installed deep inside of a PL-259. It showed an R of 47 ohms and no measurable reactance on the bridge, up to 28.2 MHz. (The bridge is "rated" for use from 1 to 100 MHz.)

The Cantenna showed:

Freq (MHz)	R(ohms)	X(+ohms)
1.7	47	0
3.7	47	0
7.2	47	3.2
14.2	47	3.2
21.2	47	4.5
28.2	47	2.7

All the reactances are inductive.

If I'm doing my maths & Smith Chart stuff correctly, the worst-case SWR, on 15 m, is 1.0045:1 (please, a cross-check from someone?).

If correct, this seems rather ok, don't you think? (I wish I could do these measurements on 50 and 144 MHz as well.)

Perhaps someone could characterize the Cantenna using a "pro-grade" network analyzer.

--John Sehring WB0EQ/VE6

Date: Mon, 21 May 2007 10:40:14 -0700

From: Mike <mike46@shaw.ca>

Subject: Question - Heathkit DX-100 Power Supply

To: Old Tube Radios <boatanchors@theporch.com>

Message-id: <000601c79bcf\$17190640\$6501a8c0@m0a1da7d341114>

MIME-version: 1.0

Content-type: text/plain; format=flowed; charset=iso-8859-1; reply-type=original

Content-transfer-encoding: 7bit

Trouble shooting revealed a much lower than specs voltage from the LV power supply, around 200 volts where there should have been about 350. The design of the post rectifier circuit is pretty standard, a 20 uF cap followed by a choke followed by a 40 uF cap. The two caps are in a metal can, it's actually a 20/20/20 uF cap with two sections paralleled.

After a little more work the cap was identified as the problem, so it was removed, the can sawed open, contents (ugh) removed, 22 and 47 uF caps inserted, then the can glued back together and re-installed. (Notice the missing step of trying out the 22 and 47 uF caps in the circuit before putting them in the can, etc.)

Turned on the Tx and the voltage was 390 volts. (With a 425 volt start-up surge.) (If the 22 uF cap is taken out of the circuit the voltage is about 200 volts so that must have been the initial failure.)

OK, so why the voltage increase above specs with near proper value components installed? Are modern caps much more efficient? Does 2 uF make that much difference?

(And yes I am using a Variac and isolation transformer to keep things reasonable.)

Mike VE7MMH

Date: Mon, 21 May 2007 12:52:06 -0500 (CDT)
From: Bob Roehrig <broehrig@aurora.edu>
To: Old Tube Radios <boatanchors@theporch.com>
Cc: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Question - Heathkit DX-100 Power Supply
Message-ID: <Pine.LNX.4.61.0705211251370.10104@hermes.aurora.edu>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII; format=flowed

On Mon, 21 May 2007, Mike wrote:

> OK, so why the voltage increase above specs with near proper value components
> installed? Are modern caps much more efficient? Does 2 uF make that much
> difference?

What's your line voltage at the input? No - 2uf won't make the difference.

Bob Roehrig
Aurora University Telecom dept.
broehrig@aurora.edu

K9EUI W9ZGP WD2XSH/19
630-844-4898 fax 630-844-4222
"Nostalgia is a thing of the past"

Message-ID: <4953775.1179770378356.JavaMail.root@elwamui-royal.atl.sa.earthlink.net>
Date: Mon, 21 May 2007 10:59:38 -0700 (GMT-07:00)
From: spr@earthlink.net
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Question - Heathkit DX-100 Power Supply
Mime-Version: 1.0
Content-Type: text/plain; charset=UTF-8
Content-Transfer-Encoding: 7bit

Mike,

What's the line voltage at the Variac output? The 350 V figure was probably based on either 115 or 117 V. If you want to adjust the DC output down, use a 10 uF input cap instead of the 22 uF...but go on line and find the ripple current rating for the cap you use! The ripple current will be about twice the DC current (I'll tell you the equation for it if you like). Modern caps are so small that sometimes the lower values won't carry the necessary ripple currents.

If you can't figure out how to read the data sheets for ripple currents (they're in the table of case sizes...) I can help. If you don't know what the manufacturer and model numbers are-and they're now sealed in the hulk of the twist-lok-try the Nichicon VX series for a good estimate.

Regards,

Scott

-----Original Message-----

>From: Mike <mike46@shaw.ca>
>Sent: May 21, 2007 10:40 AM
>To: Old Tube Radios <boatanchors@theporch.com>
>Subject: Question - Heathkit DX-100 Power Supply
>
>Trouble shooting revealed a much lower than specs voltage from the LV power
>supply, around 200 volts where there should have been about 350. The design
>of the post rectifier circuit is pretty standard, a 20 uF cap followed by a
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>actually a 20/20/20 uF cap with two sections paralleled.
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>After a little more work the cap was identified as the problem, so it was
>removed, the can sawed open, contents (ugh) removed, 22 and 47 uF caps

>inserted, then the can glued back together and re-installed. (Notice the
>missing step of trying out the 22 and 47 uF caps in the circuit before
>putting them in the can, etc.)
>
>Turned on the Tx and the voltage was 390 volts. (With a 425 volt start-up
>surge.) (If the 22 uF cap is taken out of the circuit the voltage is about
>200 volts so that must have been the initial failure.)
>
>OK, so why the voltage increase above specs with near proper value
>components installed? Are modern caps much more efficient? Does 2 uF make
>that much difference?
>
>(And yes I am using a Variac and isolation transformer to keep things
>reasonable.)
>
>Mike VE7MMH
>

Content-Disposition: inline
Content-Transfer-Encoding: binary
Mime-Version: 1.0
From: John Sehring <jsehring@siouxvalley.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: SWR Bridges - More
Content-Type: text/plain
Message-Id: <20070521180339.69AF93451C9@filter6.e-filtering.net>
Date: Mon, 21 May 2007 12:03:39 -0600 (MDT)

Follow-on to my previous note...

1. I normalized my SWR calc's in prior note to 47 ohms instead of 50 ohms, although someone pointed out that 50 ohms is not sacred anyhow.

Normalizing to 50 ohms gives a worst-case SWR of 1.06:1, still excellent. And yes, you can "calibrate" your SWR bridge (if it's of the Heath AM-2 type, i.e. has a resistor in series with each detector diode equal to 2X the impedance of the intended bridge impedance) by fiddling with both (for forward & reverse readings) resistors (the final values may not be equal to each other due to some lack of symmetry).

2. I run my Cantenna outside the can. I've had too much of a mess with the "transformer" oil. (Heath sez that mineral oil is ok as well but NOT motor oil.) It seems to creep out of the can, what a mess! So I run the load resistor "dry", in the air & just don't pound it with a lot of power for very long! Any other ideas on oil here?

Just for the heck of it, I looked at it to make sure all hardware was properly

tight & assembled correctly (I have the manual for it).

I found lots of loose hardware, not surprising.

However, the top one of the sheet brass rings (circular clamp, bent 90 degrees at both ends to come together) that make connections for the load resistor was completely broken in a straight line at one of the bends! I wonder how this dummy load worked consistently at all having such poor contact with the load resistor?

I saw some evidence of overheating at the break. The discoloration was confined to a very tiny (1/64") spot. Perhaps this was the very last tiny spot of continuity in the clamp as it was breaking, so all the current ran thru it finally breaking it completely.

My guess is maybe I did this by running it too hard outside of the oil.

Or maybe not (gotta cut myself some slack). As it was the *top* ring that broke, maybe the oil level dropped to where the ring was out in the air & so it overheated much more readily than the lower, submerged clamp.

Oh well, I'll fix the ring & think about running with oil again. Phooey!

--John Sehring WB0EQ/VE6

Message-ID: <4651DF63.2000801@dtnspeed.net>
Date: Mon, 21 May 2007 13:05:23 -0500
From: Rodger <wq9e@dtnspeed.net>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
CC: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Question - Heathkit DX-100 Power Supply
Content-Type: text/plain; charset=ISO-8859-1; format=flowed
Content-Transfer-Encoding: 7bit

Hi Mike,

You are only about 10% higher than the original specification so I think this is plenty close. If you set your input voltage to 110 with the variac and operate the transmitter where all of the power supplies are loaded you will probably be very close to the original Heathkit value.

Don't worry about the 2 uf increase in value. Many of the older electrolytics had rated tolerances of +/- 20% or greater so a few uf will make no difference.

If you are concerned about the startup surge you can add an inrush current limiter (readily available from Mouser, Digikey, and others) which will tame the surge.

73, Rodger WQ9E

Mike wrote:

> Trouble shooting revealed a much lower than specs voltage from the LV
> power supply, around 200 volts where there should have been about
> 350. The design of the post rectifier circuit is pretty standard, a
> 20 uF cap followed by a choke followed by a 40 uF cap. The two caps
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> (And yes I am using a Variac and isolation transformer to keep things
> reasonable.)
>
> Mike VE7MMH
>
>

Date: Mon, 21 May 2007 13:15:09 -0500 (CDT)
From: Bob Roehrig <broehrig@aurora.edu>
To: Old Tube Radios <boatanchors@theporch.com>
Cc: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: SWR Bridges - More
Message-ID: <Pine.LNX.4.61.0705211314190.10104@hermes.aurora.edu>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII; format=flowed

On Mon, 21 May 2007, John Sehring wrote:

> Oh well, I'll fix the ring & think about running with oil again. Phooey!

John - I just keep my cantenna sitting in a plastic bucket.

Bob Roehrig
Aurora University Telecom dept.
broehrig@aurora.edu
K9EUI W9ZGP WD2XSH/19
630-844-4898 fax 630-844-4222
"Nostalgia is a thing of the past"

Message-ID: <29091869.1179772620494.JavaMail.root@elwamui-royal.atl.sa.earthlink.net>
Date: Mon, 21 May 2007 11:37:00 -0700 (GMT-07:00)
From: spr@earthlink.net
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: SWR Bridges - More
Cc: Old Tube Radios <boatanchors@theporch.com>
Mime-Version: 1.0
Content-Type: text/plain; charset=UTF-8
Content-Transfer-Encoding: 7bit

Folks,

An alternative to oil is a fan. You might not be OK for a full gallon but it's much better than still air cooling. Noise, but no mess.

/scott

-----Original Message-----

>From: Bob Roehrig <broehrig@aurora.edu>
>Sent: May 21, 2007 11:15 AM
>To: Old Tube Radios <boatanchors@theporch.com>
>Cc: Old Tube Radios <boatanchors@theporch.com>
>Subject: Re: SWR Bridges - More
>
>On Mon, 21 May 2007, John Sehring wrote:
>
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>John - I just keep my cantenna sitting in a plastic bucket.
>
>
>
>

Bob Roehrig

> Aurora University Telecom dept.
> broehrig@aurora.edu
> K9EUI W9ZGP WD2XSH/19
> 630-844-4898 fax 630-844-4222
> "Nostalgia is a thing of the past"
>

Message-ID: <005501c79be0\$dd204e50\$de9f480c@KB6NAX>
From: "Arden Allen" <gumbear@pacbell.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Question - Heathkit DX-100 Power Supply
Date: Mon, 21 May 2007 12:47:03 -0700
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

> OK, so why the voltage increase above specs with near proper value
> components installed? Are modern caps much more efficient? Does 2 uF
make
> that much difference?

When verifying voltages in our beloved boatanchors there are a number of reasons we get different readings from those indicated in manufacturer's technical literature. The most common cause is incorrect information. Voltage readings have been noted as being taken at line voltages of 115, 117 and 120 volts in different manufacturer's information, for example. Design changes that cause a shift in voltages are often not reflected by corrections in schematics. Often manufacturer's voltage readings were taken with a VOM which has a varying input resistance with range instead of a VTVM with its constant input resistance. The next cause is ordinary variances in circuit operation, rectifier efficiency, component tolerances and aging, circuit loading due to different operating conditions, etc. Our measurement techniques vary. Today many of us use digital multimeters that have input resistances that are typically infinite or 10 megohms depending on range. A good rule of thumb is to not panic if a reading is within roughly 20% of indicated in service literature. Some investigation and experimentation will most likely solve riddles about voltage readings. With regard to 2uF added to 20uF, that's only a 10% difference. Most power supply electrolytics are no better than 20% tolerance parts and capacitance often changes somewhat from the new part value to a well used part value depending on circuit conditions. Line voltage waveform will also have some effect on the voltages experienced in a power supply but not likely more than a percent or two. And lastly, some of us boatanchorquarians haven't checked the calibration of our voltmeters since the boatanchors themselves were built ;-)

Arden Allen
KB6NAX

Message-ID: <4651F9CD.2090300@mindspring.com>
Date: Mon, 21 May 2007 15:58:05 -0400
From: Garey Barrell <k4oah@mindspring.com>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: SWR Bridges - More
Content-Type: text/plain; charset=ISO-8859-1; format=flowed
Content-Transfer-Encoding: 7bit

John -

I have been using Cantennas for 40 years, and unless they're overfilled, they won't spit out oil. I've always used mineral oil, available cheaply at farm supply stores. They WILL however emit oil "vapor" if you hit them too hard / too long. That's why the little pressure relief valve on top of the can. For that reason, I sit them in a 9" round pie tin, which keeps the oil vapor that condenses on the outside of the can from dripping on the floor.

I recently moved one that had been sitting in the same spot behind a desk for about 20 years in it's pie pan, and there was no sign of oil anywhere outside the diameter of the pan. There was a sticky film on the side of the can, and same on the exposed inner surface of the pie pan, but NONE apparent on the rug surrounding it. Over the years, this one has had the L-4B run at full output into it for 30 seconds or so at a time. Sometimes just a "wee" bit longer! :-)

I've added a B&W dry dummy load, about 4" square and 44" long with a fan mounted on one end. Don't have to worry about time any more, but it sure takes up a LOT more space. I also have a Drake DL1000 with a fan and a DL300 that I use occasionally, but they are also derated pretty heavily for time vs power. The DL1000 is rated at 1000W for 1.5 minutes when the FA-7 fan is on it. I have a considerably faster (and noisier fan) mounted and have run it over 2 minutes at 1500W with no measurable degradation.

73, Garey - K40AH
Glen Allen, VA

Drake 2-B, 4-B & C-Line Service Supplement CDs
<www.k4oah.com>

John Sehring wrote:

> Follow-on to my previous note...

>

> 1. I normalized my SWR calc's in prior note to 47 ohms instead of 50 ohms,
> although someone pointed out that 50 ohms is not sacred anyhow.

>

> Normalizing to 50 ohms gives a worst-case SWR of 1.06:1, still excellent. And
> yes, you can "calibrate" your SWR bridge (if it's of the Heath AM-2 type, i.e.
> has a resistor in series with each detector diode equal to 2X the impedance of
> the intended bridge impedance) by fiddling with both (for forward & reverse
> readings) resistors (the final values may not be equal to each other due to some
> lack of symmetry).

>

> 2. I run my Antenna outside the can. I've had too much of a mess with the
> "transformer" oil. (Heath sez that mineral oil is ok as well but NOT motor
oil.)

> It seems to creep out of the can, what a mess! So I run the load resistor
> "dry", in the air & just don't pound it with a lot of power for very long! Any
> other ideas on oil here?

>

> Just for the heck of it, I looked at it to make sure all hardware was properly
> tight & assembled correctly (I have the manual for it).

>

> I found lots of loose hardware, not surprising.

>

> However, the top one of the sheet brass rings (circular clamp, bent 90 degrees
at

> both ends to come together) that make connections for the load resistor was
> completely broken in a straight line at one of the bends! I wonder how this
> dummy load worked consistently at all having such poor contact with the load
> resistor?

>

> I saw some evidence of overheating at the break. The discoloration was confined
> to a very tiny (1/64") spot. Perhaps this was the very last tiny spot of
> continuity in the clamp as it was breaking, so all the current ran thru it
> finally breaking it completely.

>

> My guess is maybe I did this by running it too hard outside of the oil.

>

> Or maybe not (gotta cut myself some slack). As it was the *top* ring that
broke,

> maybe the oil level dropped to where the ring was out in the air & so it
> overheated much more readily than the lower, submerged clamp.

>

> Oh well, I'll fix the ring & think about running with oil again. Phooey!

>

> --John Sehring WB0EQ/VE6

>

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>
>
>

End of BOATANCHORS Digest 4053
